



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0106; Directorate Identifier 2011-NM-150-AD]

RIN 2120-AA64

Airworthiness Directives; BAE SYSTEMS (OPERATIONS) LIMITED Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all BAE SYSTEMS (OPERATIONS) LIMITED Model BAe 146 and Avro 146-RJ airplanes.

This proposed AD was prompted by reports of baggage bay fire bottles that can be misassembled such that two squib electrical connectors can be cross-connected. This proposed AD would require a general visual inspection of certain baggage bay fire bottles for correct connection and for the length of the wiring loom, modifying the wiring loom to certain squib connectors, and corrective actions if necessary. We are proposing this AD to detect and correct excessive wiring loom length and improper connection of the squib connectors, which in conjunction with a fire in one of the baggage bays, could result in the fire extinguishing agent being discharged into a wrong compartment and consequent damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact BAE SYSTEMS (OPERATIONS) LIMITED, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; e-mail RAPublications@baesystems.com; Internet <http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-1175; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-0106; Directorate Identifier 2011-NM-150-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will

also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2011-0065, dated April 7, 2011 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

The baggage bay fire bottles of certain BAe 146 and AVRO 146-RJ aeroplanes can be misassembled such that two squib electrical connectors can be cross-connected. This has been caused by an error in the baggage bay fire bottle Component Manufacturer Manual (CMM) and by excessive wiring loom length.

This condition, if not corrected and in conjunction with a fire in one of the baggage bays, could result in the fire extinguishant to be discharged into a wrong compartment and consequent potential damage to the aircraft * * *.

In addition to the CMM revision, to address this unsafe condition, BAE Systems developed modifications to reroute the baggage bay fire bottle wiring looms and prevent crossed electrical connections.

For the reasons described above, this [EASA] AD requires the implementation of modifications HCM36250A and HCM36250B to affected aeroplanes.

Required actions include general visual inspections of certain baggage bay fire bottles for correct connection and for the length of the wiring loom, modifying the wiring loom to certain squib connectors, and corrective action if necessary. Corrective actions include reconnecting the squibs connectors and modifying the loom to proper length. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

BAE SYSTEMS (Operations) Limited has issued Modification Service Bulletin SB.26-077-36250A.B, Revision 4, dated January 7, 2011. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Differences Between This Proposed AD and the MCAI or Service Information

This proposed AD differs from the MCAI and/or service information as follows: The actions specified in paragraph (10) (test and close-up) of EASA AD 2011-0065, dated April 7, 2011, are not included in this AD.

Costs of Compliance

Based on the service information, we estimate that this proposed AD would affect about 1 product of U.S. registry. We also estimate that it would take about 6 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$170 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control

warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$680 per product.

In addition, we estimate that any necessary follow-on actions would take about 3 work-hours and require parts costing \$170, for a cost of \$425 per product. We have no way of determining the number of products that may need these actions.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States,

or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:

BAE SYSTEMS (OPERATIONS) LIMITED: Docket No. FAA-2012-0106;

Directorate Identifier 2011-NM-150-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to BAE SYSTEMS (OPERATIONS) LIMITED Model BAe 146-100A, -200A, and -300A airplanes, and Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A airplanes; certificated in any category; all serial numbers, on which modifications HCM30480A, HCM30480B, HCM30480C, HCM30480D, HCM30480E, or HCM30480F are embodied.

(d) Subject

Air Transport Association (ATA) of America Code 26: Fire Protection.

(e) Reason

This AD was prompted by reports of baggage bay fire bottles that can be misassembled such that two squib electrical connectors can be cross-connected. We are issuing this AD to detect and correct excessive wiring loom length and improper connection of the squib connectors, which in conjunction with a fire in one of the baggage bays, could result in the fire extinguishing agent being discharged into a wrong compartment and consequent damage to the airplane.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Inspection/Modification

Within 3 months after the effective date of this AD, do the actions specified in paragraphs (g)(1), (g)(2), (g)(3), (g)(4), (g)(5), and (g)(6) of this AD.

(1) Do a general visual inspection of baggage bay fire bottle WB8 having part number (P/N) 473997-1 for correct connection of the squib connectors identified in paragraphs (g)(1)(i) and (g)(1)(ii) of this AD, in accordance with paragraph 2.C.(3) of the Accomplishment Instructions of BAE SYSTEMS (OPERATIONS) LIMITED Modification Service Bulletin SB.26-077-36250A.B, Revision 4, dated January 7, 2011. If any items are found improperly connected, before further flight, reconnect the squib connectors properly, in accordance with paragraph 2.C.(3) of the Accomplishment Instructions of BAE SYSTEMS (OPERATIONS) LIMITED Modification Service Bulletin SB.26-077-36250A.B, Revision 4, dated January 7, 2011.

(i) Squib connector WB8P1 (S1446-004A) and cartridge P/N 446307.

(ii) Squib connector WB8P2 (S1446-004D) and squib P/N 446290.

(2) Do a general visual inspection of the length of the wiring loom at the squib connector WB8P2 for excessive length that could cause the connector to become cross-connected with squib connector WB8P1, in accordance with paragraph 2.C.(4) of the Accomplishment Instructions of BAE SYSTEMS (OPERATIONS) LIMITED Modification Service Bulletin SB.26-077-36250A.B, Revision 4, dated January 7, 2011.

If excessive length is found, before further flight, modify the loom, in accordance with paragraph 2.C.(4) of the Accomplishment Instructions of BAE SYSTEMS (OPERATIONS) LIMITED Modification Service Bulletin SB.26-077-36250A.B, Revision 4, dated January 7, 2011.

(3) Do a general visual inspection of baggage bay fire bottle WB7 having P/N 473996-1 for correct connection of squib connectors identified in paragraphs (g)(3)(i) and (g)(3)(ii) of this AD, in accordance with paragraph 2.C.(5) of the Accomplishment Instructions of BAE SYSTEMS (OPERATIONS) LIMITED Modification Service Bulletin SB.26-077-36250A.B, Revision 4, dated January 7, 2011. If any items are found improperly connected, before further flight, reconnect the squib connectors properly, in accordance with paragraph 2.C.(5) of the Accomplishment Instructions of BAE SYSTEMS (OPERATIONS) LIMITED Modification Service Bulletin SB.26-077-36250A.B, Revision 4, dated January 7, 2011.

(i) Squib connector WB7P1 (S1446-004A) and cartridge P/N 446307.

(ii) Squib connector WB7P2 (S1446-004D) and squib P/N 446290.

(4) Modify the wiring loom to squib connector WB7P2, in accordance with paragraphs 2.C.(6)(a) and 2.C.(6)(c) of the Accomplishment Instructions of BAE SYSTEMS (OPERATIONS) LIMITED Modification Service Bulletin SB.26-077-36250A.B, Revision 4, dated January 7, 2011.

(5) Modify the wiring loom to squib connector WB7P1, in accordance with paragraph 2.C.(6)(b) of the Accomplishment Instructions of BAE SYSTEMS

(OPERATIONS) LIMITED Modification Service Bulletin SB.26-077-36250A.B,
Revision 4, dated January 7, 2011.

(6) Install modification HCM36250B, in accordance with paragraph 2.C.(7) of the
Accomplishment Instructions of BAE SYSTEMS (OPERATIONS) LIMITED Service
Bulletin SB.26-077-36250A.B, Revision 4, dated January 7, 2011.

Note 1 to paragraph (g): Guidance for test and close-up procedures can be found
in paragraphs 2.D. and 2.E. of the Accomplishment Instructions of BAE SYSTEMS
(OPERATIONS) LIMITED Modification Service Bulletin SB.26-077-36250A.B,
Revision 4, dated January 7, 2011.

**(h) Credit for Actions Accomplished in Accordance with Previous Service
Information**

Installing modification HCM36250A in accordance with the service information
specified in paragraphs (h)(1), (h)(2), (h)(3), or (h)(4) of this AD before the effective date
of this AD is acceptable for compliance with the actions specified in paragraphs (g)(1),
(g)(2), (g)(3), (g)(4), and (g)(5) of this AD.

(1) BAE SYSTEMS (OPERATIONS) LIMITED Modification Service Bulletin
SB.26-077-36250A, dated September 4, 2009.

(2) BAE SYSTEMS (OPERATIONS) LIMITED Modification Service Bulletin
SB.26-077-36250A, Revision 1, dated September 11, 2009.

(3) BAE SYSTEMS (OPERATIONS) LIMITED Modification Service Bulletin
SB.26-077-36250A.B, Revision 2, dated October 14, 2010.

(4) BAE SYSTEMS (OPERATIONS) LIMITED Modification Service Bulletin
SB.26-077-36250A.B, Revision 3, dated November 23, 2010.

(i) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) **Alternative Methods of Compliance (AMOCs):** The Manager, International Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-1175; fax (425) 227-1149. Information may be e-mailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) **Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(j) Related Information

Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2011-0065, dated April 7, 2011; and BAE SYSTEMS (OPERATIONS) LIMITED Modification Service Bulletin SB.26-077-36250A.B, Revision 4, dated January 7, 2011; for related information.

Issued in Renton, Washington, on January 26, 2012.

Kalene C. Yanamura,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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